

REMARKS

Favorable reconsideration of the above-identified application is requested in view of the amendments herein and the following remarks.

Claims 2 and 9 are canceled. Thus, Claims 1, 3-8 and 10-14 are pending in this application, with Claim 1 being the only independent claim.

On the top of page two of the Official Action an issue is raised with regard to the claim language "multiple filling chambers." Accordingly, the relevant claims are amended thereby addressing that issue.

One of the aspects of the present application relates to charging a gel-like medium into multiple filling chambers by inserting closely a bag having the heating medium charged therein, into each of multiple filling chambers and sealing the multiple filling chambers. This subject matter was formerly referred to in Claim 3 and is now included in Claim 1.

Another aspect of the present application relates to increasing pressure of the filling chambers. This is done by providing embosses. Each emboss is formed by bonding together predetermined regions of wall surfaces that form one of the multiple filling chambers, the predetermined wall surfaces being opposite to one another and in the vicinity of at least one end of the filling chamber. That subject matter was previously referred to in Claim 9 and is now included in Claim 1.

Accordingly, Claim 1 presently defines a mat comprising multiple filling chambers that are in parallel and adjacent to each other. The multiple filling chambers are formed of flexible sheets. A gel-like heat medium is charged into the multiple filling chambers by inserting closely a bag having the heat medium charged therein into each of the multiple filling chambers and sealing the multiple filling

chambers. The multiple filling chambers are expanded by a pressure of the heat medium by providing embosses. Each emboss is formed by bonding together predetermined regions of wall surfaces that form one of the multiple filling chambers. The predetermined wall surfaces are opposite to one another and in the vicinity of at least one end of the filling chamber.

As described in the present application, the embossing is done in order to increase the pressure of the heat medium within the multiple filling chambers. The embossing is formed by crushing flat and heat sealing together predetermined regions of each filling chamber. Consequently, volume of the chamber is decreased and pressure inside the chamber is increased. See page 9, lines 3-9, and Figure 2 of the present application. A filling chamber having embosses has a higher pressure than those without. See page 11, lines 11-12 of the present application.

When a patient lies on the operating table with a mat according to the present application, the body of the patient is held by multiple filling chambers that are expanded in a nearly cylindrical shape, and the multiple filling chambers support the body of the patient with an appropriate hardness without concentrating a load on the contact surface with the mat, and thus compressing the capillaries of the patient. See page 10, lines 10-17 of the present application.

Also, the mat according to the present application can be warmed, thereby providing an excellent effect since the patient is then kept warm and blood circulation is stimulated, thereby preventing bed sores. Also, when an abdominal operation is performed, the body temperature is better maintained by the warming effect of the mat, so that shivering can be prevented. See page 10, lines 18-22.

Claims 1, 10 and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,044,030 to Balaton, hereinafter *Balaton*.

The subject matter previously included in Claim 3, now referred to in Claim 1, was rejected as being unpatentable over *Balaton* in view of Japanese Patent No. 10-304950 to Kitagawa, hereinafter *Kitagawa*. The subject matter previously included in Claim 9, now referred to in Claim 1, was rejected as being unpatentable over *Balaton* in view of U.S. Patent No. 4,886,697 to Perdelwitz, Jr. et al., hereinafter *Perdelwitz*. Those rejections are now addressed with regard to amended Claim 1.

Balaton discloses a multiple layer fluid-containing cushion with a flexible wall means for defining a plurality of elongated, parallel, flexible tubes for containing fluid, e.g., gel. The device 20 is configured to be a cushion or a mattress (column 3, lines 31-32). With respect to Figures 1-3, *Balaton* discloses a top row of tubes 31, a middle row of tubes 32, and a bottom row of tubes 33. *Balaton* discloses that seal lines 41, 42, 43 terminate short of the peripheral seal at each end of the cushion 20 so as to provide communication between the tubes in each row. That is, all of the tubes 31 are in communication at each end in the top row, but do not communicate with the middle row of tubes 32 or the bottom row of tubes 33. All the tubes 32 communicate at each end in the middle row but do not communicate with the top row of tubes 31 or the bottom row of tubes 33. All the tubes 33 communicate at each end of the cushion 20 in the bottom row but do not communicate with the middle row tubes 32 or the top row tubes 31. See column 4, lines 19-34 of *Balaton*. Each tube in a row communicates with the other tubes in that row. The tubes have an opening that is circular in shape, i.e., "doughnut" shaped.

Kitagawa discloses a mat 1 that is made up of a plurality of water bags 2.

Each water bag 2 has an inner bag 3 into which a liquid and air are sealed, and an outer bag 4 covering the inner bag 3. The bags 2 are connected together to form a water mat. The inner bag 3 is a straight elongated shape.

Perdelwitz discloses an absorbent pad. The pad has a core material 28 that can be sandwiched between a face sheet 24 and a backing sheet 56. The core material can be "a mixture comprised of fibers or at least one thermoplastic material and other fibers, such as wood pulp fibers..." (column 3, lines 43-45). The central idea in *Perdelwitz* involves densifying the core material 28, *i.e.*, compressing the core material 28 to increase its density at certain locations. Specifically, the mixture can be "thermobonded together by heating the mixture to a temperature above the melting point of the fibers of at least one thermoplastic material in the mixture." (column 3, lines 45-47). "The thermobonded mixture is compressed and densified along at least a section of the eventual peripheral edge margin of the article." (column 3, lines 52-55). The mixture is densified, and the sheets are not welded/connected to one another. Column 5, lines 18-20 in *Perdelwitz* states that "the pad, with or without the cover sheets, may be densified in a region, as by the application of [h]eat and pressure." That is, the core 28 is densified, and the sheets 24, 56 are not embossed and connected to one another.

Claim 1 is allowable at least because it defines in part: each emboss is formed by bonding together predetermined regions of wall surfaces that form one of the multiple filling chambers, the predetermined wall surfaces being opposite to one another and in the vicinity of at least one end of the filling chamber. Neither *Balaton*, *Kitagawa*, nor *Perdelwitz* disclose that subject matter relating to embosses as

defined in Claim 1. For Example, neither *Balaton* nor *Kitagawa* disclose embosses at all. *Perdelwitz* uses the word “emboss,” but does not disclose embossing the outer sheets 24, 56 together to increase pressure. Rather, *Perdelwitz* discloses densifying the fibrous core 28 by way of embossing. Thus, *Perdelwitz* does not emboss regions of wall surfaces to one another and does not disclose the subject matter of Claim 1 for which it is relied upon.

Claim 1 is also allowable at least because it defines in part that: a gel-like heat medium is charged into multiple filling chambers by inserting closely a bag having the heat medium charged therein into each of the multiple filling chambers and sealing the multiple filling chambers. That subject matter is not disclosed by *Balaton* and would not have been obvious in view of any of the secondary references. It would not have been obvious at least because the tubes in *Balaton* are interconnected, thereby creating a situation where the openings entirely surround the sealed/welded portions, *i.e.*, a “doughnut” shaped opening. Therefore, even if a secondary reference did show bags of heat medium being inserted into filling chambers, a bag in the shape required by *Balaton* could not be inserted into *Balaton*'s filling chambers while achieving an opening with that shape and the disclosed communication between the tubes.

For at least those reasons stated above, Claim 1 is not disclosed or suggested by *Balaton* in view of the secondary references and the rejection should be withdrawn.

Claims 3-8 and 12-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Balaton* in view of various secondary references. None of the secondary references remedy the deficiency of the rejections relating to the subject

matter of present Claim 1. Those claims depend from Claim 1 and are therefore allowable for at least the same reasons.

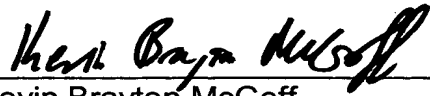
For at least the reasons stated above, all the claims in this application are allowable, and allowance of the application is requested.

Should any questions arise in connection with this application, or should thereby any remaining issues pertaining to this application, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

BUCHANAN INGERSOLL PC

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By: 
Kevin Brayton McGoff
Registration No. 53,297

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620